

## Catalogue of the Membracidae of Uruguay (Hemip., Homop.).

By FREDERIC W. GODING, Guayaquil, Ecuador.

The Membracidae are insects belonging to the order Hemiptera, sub-order Homoptera, which includes the Cicadidae, Fulgoridae, Cercopidae, Psyllidae, Aphididae and Coccidae. As a general rule they are easily separated by the well-developed prothorax into a multitude of shapes and forms.

To facilitate the identification of the different species found in Uruguay, the following synoptic table has been prepared:

- 1 (28). Tibiæ simple, not broadened or flattened.
- 2 (15). Third apical area of tegmina elongate, base truncate, never petiolate .....Subfamily DARNINÆ.
- 3 (8). Posterior process covering all or nearly all of tegmina; destitute of horns; convex, smooth, median carina obsolete.
- 4 (7). Form robust; ocelli distinctly nearer to each other than to the eyes.
- 5 (6). Lateral yellow border of prothorax originating behind eyes, extends nearly to apex, and occupies nearly half of sides of prothorax .....*Stictopelta latilinea*.
- 6 (5). Lateral yellow border of prothorax originating behind humeral angles, terminates at apex of posterior prothoracic process, occupying very narrow edge....*Stictopelta limbata*.
- 7 (4). Form slender; ocelli nearly equi-distant from each other and the eyes .....*Cryptoptera acutula*.
- 8 (3). Tegmina almost wholly uncovered.
- 9 (14). Corium of tegmina with two discoidal areas.
- 10 (11). Prothorax elevated in front, armed with a sharp horn extended outward above each humeral angle; ocelli nearer to each other than to the eyes .....*Pyranthe acaciae*.
- 11 (10). Prothorax depressed in front, armed in front with a horn turned downward; ocelli nearer to the eyes than to each other.
- 12 (13). Front horn obtuse at apex, not spatulate, median carina of which is much more elevated than lateral edges; upper surface of horn not bi-sulcate .....*Argante incumbens*.
- 13 (12). Front horn broadly spatulate at apex, its median carina equal to elevation of lateral edges forming on each side a distinct longitudinal sulcus .....*Argante tremolaris*.
- 14 (9). Corium of tegmina with one discoidal area; prothorax unarmed, with a median carina, posterior process acute,  
*Smiliorhachis proxima*.

- 15 (2). Third apical area of tegmina triangular, base petiolate,  
Sub-Family SMILINAE.
- 16 (27). Tegmina free; posterior process of prothorax narrow behind humeral angles.
- 17 (26). Base of tegmina emitting two longitudinal veins; five apical areas, three discoidal areas.
- 18 (19). Posterior process of prothorax 3-forked; apical areas of wings stylated .....*Cyphonia clavigera*.
- 19 (18). Posterior process of prothorax simple, not 3-forked; armed above each humeral angle with an acuminate horn; front elevated .....Genus *Ceresa*.
- 20 (21). Humeral horns and apex of posterior prothoracic process ferruginous; frequently a fuscous spot on costa near apex of tegmina .....*Ceresa uruguayensis*.
- 21 (20). Humeral horns concolorous, or apex and below fuscous.
- 22 (25). Apex of humeral horns directed outward and backward.
- 23 (24). Humeral horns strong; front of prothorax convex between humeral horns; ocelli distinctly nearer to each other than to the eyes .....*Ceresa pauperata*.
- 24 (23). Humeral horns slender, very acute, a little recurved; front of prothorax distinctly convex between humeral horns; ocelli nearly equi-distant from each other and eyes,  
*Ceresa brunnicornis*.
- 25 (22). Apex of humeral horns directed distinctly outward, forward and upward, concave between .....*Ceresa cavicornis*.
- 26 (17). Base of tegmina emitting three longitudinal veins, four apical and one discoidal areas in corium; dorsum of prothorax convex, posterior process acuminate; size small,  
*Acutalis variabilis*.
- 27 (16). Tegmina almost wholly covered by posterior prothoracic process, with two longitudinal veins, two or three discoidal areas, interior basal area very broad,  
*Phormophora archavclata*.
- 28 (1). Front tibiæ dilated, flattened, foliaceous,  
Sub-family MEMBRACINAE.
- 29 (30). Prothorax compresso-elevated, produced in front in a horn, gently decreasing in altitude backward, horn with a lateral carina on each side in anterior superior part which does not extend behind humeral angles, summit foliaceous; four small carinae on each side of median carina on under surface of horn .....*Enchophyllum imbellis*.
- 30 (29). Prothorax tricarinate, lateral carinae extended at least to lateral borders behind humeral angles; front produced in a high angle or horn .....*Enchenopa monoceros*.

## Subfamily SMILINIÆ.

Genus **Cyphonia**.

1832. Laporte, Ann. Soc. Ent. Fr. Ser. I, p. 229.

**C. clavigera** Fabr. Syst. Rhyng. p. 17. 1803.

A single example is in the National Museum of Uruguay, labeled "Uruguay." It is also found in Paraguay and Brazil.

Genus **Ceresa**.

1843. Amyot et Serv. Hemip. p. 539.

**C. brunnicornis** Germ. Silb. Rev. Ent. III, p. 236. 1835.

Two examples are in the Uruguayan National Museum collection, labeled "Uruguay."

**C. pauperata** Berg. Add. et Emend. Hemip. Argent. p. 149. 1884.

There are three examples in the Uruguayan National Museum collection. It feeds on *Acacia farnesiana* Willd. in Uruguay.

**C. uruguayensis** Berg. Add. et Emend. Hemip. Argent. p. 148. 1884.

Very similar to *ustulata* Fairm., from which it may be separated by the more slender horns above the humeral angles, the greenish coloring and the fuscous spot on the apex of the tegmina. It lives on *Acacia farnesiana* Willd. and has been taken at Canelones and on the Corralito River in Uruguay. Three examples are in the Uruguayan National collection.

**C. cavicornis** Stal, Freg. Eug. Resa. Ins. p. 284. 1859.

This species is not represented in the Uruguayan National collection. Stal received it from Montevideo.

Genus **Acutalis**.

1846. Fairm. Ann. Soc. Ent. Fr. Ser. 2, IV, p. 241.

**A. variabilis** Berg. Hemip. Argent. p. 244. 1879.

This species, not represented in the Uruguayan National collection, closely resembles *plagiata* Fairm. It differs from that species in its larger size, apex of posterior process not black, and absence of the reddish markings on the prothorax. It differs from *anticonigra* Fairm. in the very faint lateral prothoracic impression, in the venation of the tegmina, and in the fuscous spot on the head.

*Habitat*.—Uruguay.

Genus **Phormophora.**

1869. Stal, Hem. Fab. II, p. 28.

**P. arechavaleta** n. sp.

Testaceous, densely punctured; median carina nearly obsolete; a broad, diagonal stripe on each side behind humeral sinus, lateral borders from sinus posteriorly, and a spot on each tegmen in front of middle, yellow; sides of chest, and sometimes spots on posterior process of prothorax, tarsi, costa, two longitudinal veins, and veins surrounding fourth apical area, ferruginous; basal half of costal and interior basal areas, and large part of apex of tegmina, fuliginous.

Long. 7, lat. inter hum. ang. 3 mm.

Described from four females; *types* in Uruguayan National collection and in collection F. W. G.

*Hab.*—Uruguay.

The fourth and fifth apical areas united equal width of the broad interior basal area; whereas, in *maura* Fab., the only other member of the genus, the same space is occupied by the fifth area alone; also the third apical area is not small, as in *maura*, but is of the usual size and rather long and narrow.

The examples in the Uruguayan National collection are labeled "*Darnis amargosi* Berg," which doubtless is a manuscript name as no description seems to have been published. It feeds on *Syringium* sp. in February.

*Pupa.*—There is in the Uruguayan collection one example of the pupa of this species, badly mutilated, the body missing; but, as descriptions of pupae of this family are rarely published, the following has been prepared.

Testaceous, mottled with ferruginous, pubescent; head similar to the mature insect, but more rugose; prothorax dome-like, deeply excavated at base in the middle, on each disc of which it has several black spots; dorsum highly elevated and rugose, with a deep impression on each side in front; posterior edge extending towards the summit, on each side, suddenly extending backward in a triangular shape, on the top with three large longitudinal fuscous marks; the apex of the triangle nearly reaches the base of abdomen; at the summit is a crest-like foliation resembling a cock's comb, red, extending forward; the metathorax is exposed behind the posterior border of the prothorax. The wing pads are strong, flat, and joined together, over the abdomen, by a broad flat membrane. Abdomen is exposed, along its median

line on the dorsum, is a line of small tubercles, one on each segment.

The pupa is about half the size of the adult.

I take great pleasure in naming this interesting species after the distinguished botanist and director of the National Museum of Uruguay, recently deceased, who was the father of the study of natural history in Uruguay. The *Flora Uruguayensis* will cause Dr. Arechavaleta's name to be respected for all time.

Subfamily DARNINAE.

Genus **Stictopelta**.

1869. Stal, Hemip. Fabr. II, p. 32.

**S. latilinea** Walker, List Hom. Brit. Mus. Suppl. p. 147. 1858.

There are two examples in the Uruguayan National collection, labeled "Uruguay"; Walker's material was received from Constanca, Province of Rio, Brazil.

**S. limbata** Burm. in Silb. Rev. Ent. IV, p. 173. 1836.

Four examples are in the Uruguayan National collection, from Uruguay.

Genus **Cryptoptera**.

1869. Stal, Hemip. Fab. II, p. 32.

**C. acutula** Fairm. *ibid.* p. 481. 1846.

Although this genus is widely distributed from Mexico to the River Plate, *acutula* is the only species so far found here. The two examples in the Uruguayan National collection are smaller than Fairmaire's type, but otherwise agree with his description.

*Hab.*—Uruguay. Also Mexico, Panama, Brazil (Fowler).

Genus **Pyranthe**.

1867. Stal. Ofv. Vet-Ak. Forh. p. 558.

**P. acaciae** Berg. Add. et Emend. Hemip. Argent. p. 152. 1884.

It is closely related to Stal's *bimaculata* and *laticornis*, but differs from both in the robust, acuminate humeral horns which are directed a trifle upward and backward.

Berg describes the larva which, with the mature insect, is found on *Acacia farnesiana* Willd. The Uruguayan National collection possesses one female.

*Hab.*—Uruguay.

Genus *Argante*.

1867. Stal, Ofv. Vet-Ak. Forh. p. 558.

**A. incumbens** Germ. in Silb. Rev. Ent. III, p. 239. 1835.

A series of eight examples are in the Uruguayan National collection, from Uruguay. It is found in the month of May, on the leaves of *Eryngium agavifolium* Grb.

**A. tremolaris** n. sp.

Black, smaller, more depressed, and much more slender than *incumbens*. Head broad, short, apex rounded transversely, much retracted forming a sharp edge; ocelli pale, between themselves and the eyes doubly distant; punctured. Prothorax armed in front with a strong, dependent, curved horn extending forward and downward which is broadly spatulate at apex; the spatulate apex is furnished with a well marked median carina; the edge on each side is elevated which forms a deep channel on each side; median carina prominent to a line passing between humeral angles, thereafter nearly obsolete, the lateral carinæ also extending to humeral angles; prothorax convex, laterally somewhat depressed or flattened; posterior process broad at base, convex, gradually decreasing in breadth to apex which extends a trifle beyond tip of abdomen, strongly punctured. Tegmina rather narrow, blackish brown almost to extremities, where they are narrowly yellowish white and transparent; wings have four apical areas, base of second truncate. Legs concolorous, front tibiæ not dilated. Female similar to male, larger, and median carina percurrent.

Long. from apex of front horn to extremity of tegmina 8, lat. inter hum. ang. 2 mm.

Described from one male and four females.

*Types*.—in Uruguayan National collection, and coll. F. W. G.

*Hab.*—Piriapolis, Uruguay. Collector, J. Tremolares. Feeds on *Syringium* sp.

This species differs from *incumbens* in the absence of a median carina on the posterior prothoracic process of the male, broad spatulate form of the apex of the front horn, in the elevated lateral edges toward the apex which equal the median carina; in the tegmina being very narrowly white at extremities, and black base of clavus.

So long ago as the year 1835 Germar, and later Berg, mentioned the spatulate form of the front horn in some of the examples labeled *incumbens*, and doubtless had one of this

species before them at the time. It is altogether a more slender insect.

This species is dedicated to Senor J. Tremolares, late sub-director of the National Museum of Uruguay, who, almost alone, is keeping up an interest in the entomology of Uruguay. He is now on the staff of the Uruguay Geological Survey.

Genus **Smiliorhachis**.

1846. Fairm. *ibid.* p. 290.

**S. proxima** Berg, *Add. et Emend. Hemip Argent.* p. 154. 1884.

No examples of this species are in the Uruguayan National collection; but the type was taken in Uruguay. It is close to *variegata* Fairm. and *octolineata* Stal. It differs from the former by the design of the prothorax and color of the tegmina; from the latter in its smaller size, absence of eight lines, and color of the tegmina. It is found in November, on *Acacia farnesiana* Willd.

*Hab.*—Uruguay (Berg).

Subfamily MEMBRACINÆ.

Genus **Enchophyllum**.

1843. Amyot et Serv. *Hem.* p. 534.

**E. imbelle** Stal, *Ofv. Vet-Ak. Forh.* p. 271. 1869.

It is not represented in the Uruguayan National collection.

*Hab.*—Montevideo, Uruguay. (Arechavaleta.)

Genus **Enchenopa**.

1843. Amyot et Serv. *Hem.* p. 535.

**E. monoceros** Germ. in *Mag. Ent.* IV, p. 28. 1824.

The Uruguayan National Museum possesses four examples. It feeds on *Acacia farnesiana* Willd.

*Hab.*—Uruguay.

The entomology of Uruguay is well represented in the collection of the National Museum of Uruguay, where the insects are well taken care of. It is to be hoped that arrangements will soon be made for the correct identification of the material not already determined by the late zoologist, Senor J. Tremolares.